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AUTHOR McKibbin, Sue; And Others
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ABSTRACT

To bridge the communication gap between research and practice related to educational innovation and school improvement, the authors present a selective summary, prepared especially for innovation disseminators and educational practitioners, of the key ideas in the six essays in the book "Improving Schools: Using What We Know" (1981). The document's first section examines the different assumptions and implications of technological, political, and cultural perspectives on educational innovation. Section 2 looks at the dynamics of educational change. It first notes the common characteristics of schools and then discusses the school dilemma of choosing among four pairs of alternatives--coordination versus flexibility, external expertise-seeking versus self-reliance, centralized versus shared influence, and change versus stability. This section next considers the costs and rewards of educational change and suggests ways to move away from the technological mindset. The role of outsiders and insiders in school change is analyzed in the final section, which examines the characteristics and strategies of external change agents before discussing the roles of teachers, principals, superintendents, and district resource staff. The authors suggest that a team approach could bring insiders and outsiders together. (Author/RW)

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

USING KNOWLEDGE FOR SCHOOL IMPROVEMENT:

A GUIDE FOR EDUCATORS

Selective Summary Prepared by:

Sue McKibbin
Ann Lieberman
David Degener

Based on Papers Prepared by:

Paul Berman
Michael Fullan
Ernest House
Karen Seashore Louis
Matthew Miles
Sam Sieber

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FAR WEST LABORATORY
FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
1855 FOLSOM STREET · SAN FRANCISCO, CALIFORNIA 94103

EA 014 745

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FOREWORD

During the 1970's, many experts studied educational innovation and change. The studies have become so voluminous that some stocktaking is needed to increase understanding of major findings about the improvement of educational practice. A pioneering effort of this kind is A Synthesis of Findings Across Five Recent Studies of Educational Dissemination and Change by John A. Emrick and Susan M. Peterson (Far West Laboratory, 1978).

Based on the experience with that effort, a working group of six prominent scholars was recruited in 1979 to undertake a broader synthesis that could be used to develop a research agenda for school improvement. By the end of 1979, the six contributors to this knowledge synthesis effort had developed and exchanged drafts of their papers; each was subsequently revised during 1980. The six papers are:

House, Ernest. Three Perspectives on Innovation--The Technological, the Political, and the Cultural.

Miles, Matthew. Generic Properties of Schools in Context: The Backdrop for Knowledge Utilization and "School Improvement."

Sieber, Sam. Incentives and Disincentives for Knowledge Utilization in Public Education.

Berman, Paul. Toward an Implementation Paradigm of Educational Change.

Louis, Karen Seashore. The Role of External Agents in Knowledge Utilization, Problem Solving, and Implementation of New Programs on Local School Contents.

Fullan, Michael. The Role of Human Agents Internal to School Districts in Knowledge Utilization.

Sage Publications, recognizing the importance of this collection of papers, has published a revised version under the title Improving Schools: Using What We Know (Rolf Lehming and Michael Kane, eds., Sage Publications, 1981).

Realizing that the papers had been written by researchers, and that they were addressed primarily to researchers, the Educational Dissemination Studies Program (EDSP) staff proposed the development of a shorter document to summarize key ideas that might be specially interesting or useful to those engaged in dissemination activities.

The authors gave their permission for EDSP staff to send review copies of the papers to various educators for comment and critique. More

than a score of persons, including school administrators, teachers, disseminators, state education agency consultants, educational laboratory staff, and a local school board member, reviewed the papers. Among the diverse comments offered by these reviewers, there was some consensus that the papers might be highly useful to researchers and scholars, but it seemed unlikely that many "practitioners" would find the time, or have the patience, to deal with so much scholarly jargon and technical language. A number of reviewers were frustrated and bored by the papers, all the while feeling that they contained many interesting ideas which could be be useful if presented in a different form. Several reviewers suggested that a more popular revision be written to highlight a few of the most useful concepts in each paper, without trying to summarize all the many ideas presented. The pattern of responses also made it evident that disseminators were likely to be the primary audience for the publication, although others in education might also find the contents interesting.

This Guide for Educators represents an EDSP staff attempt to follow our reviewers' advice. The Guide focuses on three threads running through the six synthesis papers:

- o Three perspectives on educational innovation: the technological, political, and cultural perspectives.
- o The dynamics of educational change: the common properties of schools; dilemmas faced by schools; the rewards and costs of educational change; moving away from a technological mindset.
- o The role of outsiders and insiders in the school change process: external change agents; internal change agents.

These three themes extract only some of the ideas considered most pertinent and interesting by our panel of reviewers. There is much, much more in Improving Schools: Using What We Know. The Guide for Educators has been developed and published with two hopes: first, that a much broader audience of disseminators and other educators will become acquainted with some of the knowledge found in Improving Schools: Using What We Know; and, second, that some readers of the Guide for Educators will be prompted to read the full publication, to learn more about what they read in the Guide, and also to discover a wealth of interesting and perhaps useful information that the Guide omitted in selectively highlighting the synthesis authors' ideas.

Paul D. Hood
Director, Educational Dissemination Studies Program
Far West Laboratory for Educational Research and Development

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There would be no Guide for Educators without the major efforts of the six synthesis writers: Paul Berman, Michael Fullan, Ernest House, Karen Seashore Louis, Matthew Miles, and Sam Sieber. We are indebted to them for the ideas we used, and we apologize to them for the many ideas in their papers that we had to omit. Their editorial suggestions for this Guide were also most helpful.

Rolf Lehming, of the National Institute of Education, was involved directly in the conceptualization and planning of the original synthesis effort, made significant contributions throughout the progress of the project, was directly responsible for editing the publication Improving Schools: Using What We Know, and, with Michael Kane, edited this Guide for Educators. He, Michael Kane, and Ward Mason, also of the National Institute of Education, provided guidance and support in the preparation of the Guide.

We wish to acknowledge the diligent efforts of our reviewer panel: Jack Alioto, Superintendent of Schools, Upper Lake Union High School District (Calif.); Matilda Butler, Chair, Educational Communications Department, Far West Laboratory; Carol Choye, Area I Superintendent, San Francisco Unified School District; Josephine DeLuca, Trustee, Belmont (Calif.) School District; Kathleen Devaney, Director, Teachers' Centers Exchange, Far West Laboratory; Elaine Grady, Administrator on leave of absence, San Francisco Unified School District; Barry Grossman, Director, LEAD-IVC, Sacramento County Office of Education; Carl Hastings, Principal, Mary S. Black School, Battle Mountain (NV); Roz Hastings, a Concord (Calif.) Teacher Center staff member; Kathleen Hulburd, Director of Curriculum, Fremont Union High School District; Lynn Jenks, Director, Regional Program, Far West Laboratory; Karen Kent, Director, Marin County (Calif.) Teacher Learning Cooperative; Steve Kingsford, Director, School Resource Network; Nancy Livingston, Reading Specialist, Utah State Office of Education; Dorothy Lynch, Teacher, San Francisco Unified School District; John McCalley, Director, Facilitator Project, Office of the Santa Clara Superintentendent of Schools (Calif.); John Patterson, Coordinator of Guidance and Testing, Office of the Santa Clara Superintendent of Schools; Susan Roane, Educational Consultant; Stanley Schainker, Senior Consultant/School Management, Far West Laboratory; Beatrice Ward, Deputy Laboratory Director for Programs, Far West Laboratory; and William Webster, Special Consultant in Staff Development, California State Department of Education.

Our special thanks go to Lynn Hoover, who typed numerous drafts and prepared the final copy of this publication.

S.M.
A.L.
D.D.

INTRODUCTION

Frequently educators comment that although they hear about research on all phases of the educational process, rarely are they told how research findings can help them improve their performance or effectiveness. Putting research into practice is difficult because researchers and practitioners ask different questions, pursue different interests, and use different criteria for evaluating the relevance or usefulness of information. Moreover, researchers tend to write in a style that communicates effectively with other researchers, but that does not often communicate effectively with educators who work in local or state education agencies.

This Guide for Educators attempts to bridge the communication gap between research and practice related to educational change and school improvement. It has been especially written for dissemination professionals and other educators who are concerned about school improvement efforts. We began with six syntheses of research that explored alternative viewpoints on innovation, dilemmas faced by schools, organizational change processes, incentives and disincentives for innovation, and the role of internal and external change agents. We then summarized information in each synthesis paper that reviewers had identified as being the most interesting or useful to "practitioners."

This publication highlights some of the current thinking in the domains of educational innovation and organizational change. To do justice to such a broad topic, a variety of viewpoints must be used. The guide goes about this in the following ways:

- Section I acknowledges that the analysis of educational innovation can make use of a number of perspectives. Many factors contribute to how innovation in a school building or district is viewed or stimulated. The way we understand and discuss change processes is influenced by our predispositions to perceive the world in certain ways. Three different perspectives are explored--the technological, the political, and the cultural--so as to emphasize how their assumptions and implications vastly differ.

- Section II switches to a more specific discussion of school buildings and districts. Elementary and secondary schools in the United States have common characteristics, such as vague goals, vulnerability to the community, and a weak instructional technology. In addition, schools face numerous dilemmas caused by forces that pull them in opposite directions. Four of these dilemmas are briefly described and discussed.

  There are rewards and costs implicit in educational change of any sort. Few innovations result entirely in benefits; few pose no implementation difficulties. Efforts to change entail incentives and disincentives for those who will be involved in the new program

or process. An overview of the motivational aspects of innovation is presented in this section.

The final discussion in Section II is reminiscent of the earlier presentation of three perspectives on innovation. It points up flaws in the technological mindset that encourages people to think of innovation as something that is placed, unaltered, in the classroom. In fact, educational change usually results from "mutual adaptation" of both the innovation and the setting into which it is introduced. In other words, modifications are made in the new program or technology to help it conform to the local situation, and changes are made in school activities to try to accommodate the innovation.

- Finally, Section III takes a look at "insiders" and "outsiders" who encourage and nurture innovation for school improvement. Although this distinction is often artificial, it is easier to consider separately the roles of people who work for the school district and of those who are employed elsewhere but provide services to the district. These individuals are often called change agents, because they are the catalysts and provide continuous motivation for schools to decide first to innovate and then to implement necessary changes.

This introduction intentionally gives little more than just a fleeting glimpse of the ideas presented here. It provides an advance organizer to make it easy to fit each piece into place while exploring the publication.

Our purpose is <u>not</u> to create another comprehensive review of research for educators; rather, we want to pique interest and suggest new lenses for viewing and understanding the factors that influence school improvement. No prescriptions are included here. There are no step-by-step strategies for improving schools or successfully implementing an innovation. Such prescriptions usually lack the necessary flexibility and responsiveness to dynamics in each local setting; after all, the range of precipitating events may include anything from an increased emphasis on basic skills to angry conflict among community groups over school closings.

Here, then, is a collection of ideas, insights, perspectives, and understandings concerning school improvement efforts that can be applied to help make sense of the multitude of daily situations. Viewed in this way, the guide should prove both helpful and enlightening.

SECTION I:

THREE PERSPECTIVES ON EDUCATIONAL INNOVATION

Introduction

People make sense of what happens in their lives by using a repertoire of assumptions they have gathered over the years from formal education and informal experience. Educators use a variety of beliefs and viewpoints to understand how events occurring in schools and communities fit together coherently. These global perspectives are not all appropriate all the time. Rather, their appropriateness is determined by the context and situation in question.

This section describes the lenses Ernest House presents in his paper called "Three Perspectives on Innovation--The Technological, the Political, and the Cultural." Each perspective demonstrates the orientations and assumptions that various people may have about the change process in schools. Some will probably discover that they use one perspective a great deal more frequently than the other two. Some may also think of occasions in the past when they applied one perspective to make sense of something that would have been better understood through another lens. The three perspectives might also enable educators to anticipate future situations in light of fresh understandings of past and present events.

These perspectives are not devices used at will. Rather, they are tacit assumptions about how the world works. People are not fully aware that they are using one perspective or another. Rarely do they say, "In this situation I'm going to put on my political lens because it seems most appropriate." Even though that may be precisely what they are doing implicitly, they usually do not recognize it.

Each perspective has a different set of assumptions and emphasizes a different aspect of the change process. To illustrate how the three perspectives lead to varying answers to the same question, two examples are provided:

Question #1:

What do we need to know about the proposed instructional innovation before we decide to try it out in our school?

Answers

- Technological perspective: We need to know that the materials have been tested and shown to increase student achievement.

- Political perspective: We need to know whether or not the existing curriculum committees will still be in operation and to what extent their influence may be eroded by the innovation.

- Cultural perspective: We need to know whether or not students and teachers like the new materials enough to agree that the change is worthwhile.

Question #2:

What should we do next year to reduce problems caused by declining enrollment and the funding crunch?

Answers:

- Technological perspective: If we instituted a new system using management by objectives and zero-based budgeting, we would be able to avoid many of the problems in the first place.

- Political perspective: If we could figure out a way to keep the teacher's union from demanding a large pay increase and to reduce administrative overhead in the central office without causing a major upheaval from both camps, the problem would be alleviated.

- Cultural perspective: If we could reorganize the schools so that they were more open to the commuity and all its untapped resources, we would be able to serve our students without overloading our teachers or our budget.

Each perspective will be briefly described here. Taken together, the perspectives should help introduce new ways of understanding the actions of those who participate in educational change and school improvement.

The Technological Perspective

Because technology dominates much of American culture, it greatly influences how people perceive educational innovation. The technological perspective emphasizes the development of new "things." People assume that if the products used by teachers are improved, instruction and learning will also improve. Not only is teaching itself considered to be primarily a technology, but the social and interpersonal aspects of teaching are often viewed mechanistically.

The technological perspective assumes that change is a process governed by reason and logic. Its proponents expect schools to define their goals and decide on the best means of achieving them. Once educational needs are defined, technical resources can then be provided to alleviate those needs. Innovation is, quite simply, a matter of identifying problems or goals, finding solutions or products that meet them, and placing these solutions or products in schools.

The research and development process provides the most promising means of creating technical products to improve schools. Through this process, researchers identify a need and then develop an innovative product to address the need. After the new material has been perfected during field testing, it is disseminated to schools interested in adopting the innovation. The technological perspective supposes that a high-quality, packaged innovation will work equally well in different educational contexts. Innovations proven effective in one location may be transferred to other situations, where they are "replicated." Innovative material remains the same throughout the whole process. Thus, the technological perspective assumes that the most efficient means to a given end is a well-developed product or package of materials or a fully replicable set of practices.

How might technological dominance influence those who support innovation for school improvement? There are a number of implications and assumptions inherent in the technological viewpoint. Stated in deliberately stark terms, these include:

- School improvement is possible if the educational product is of high quality. Faculty, students, and educational contexts do not influence the effectiveness of the innovation. Because the material is used the same way in all schools, it needs no modification after it is developed.

- Change processes are predictable. Instruction and learning activities do not vary with the setting. The adoption of the innovation by one school will be quite similar to the adoption process in another school. Human behaviors that support innovation and improvement are relatively constant.

- Innovation lies more in the methods and materials than it does in the teacher. Since technology is at the center of school improvement, the significance of idiosyncratic teacher behavior is diminished.

- Organizational innovations are the result of a systematic, orderly process. Often new technologies such as word processing equipment or processes such as a programmed budgeting system are introduced into the organization with little consideration for their influence on the people who will be using them. The technological perspective assumes that the connections and interactions among all the people and elements in an organization are quantifiable, predictable, and controllable.

- The outcome of the innovation is determined by the characteristics of the technology. Factors such as student attitudes, teacher preferences, and the socioeconomic status of the community do not affect the implementation process.

- Because technical progress is a predominant goal, the major problem becomes a technical one: finding the best means to a given end. Thus evaluation and research are based on hard facts used to judge effectiveness empirically.

Technological advances have contributed significantly to education. Audio visual materials, computer assisted instruction, tape recorders, and pocket calculators are all being used in schools to individualize instruction and improve student achievement. Some materials can in fact be used successfully without the intervention of a teacher. In our technologically sophisticated society schools have access to a broad range of well-developed educational technologies that can be used to strengthen the instructional program.

Assumptions inherent in the technological perspective can, however, lead to a simplistic approach to innovation. Implicit is the notion that individuals will change their behavior if they believe that using the innovation will increase the probability of improving results. Such assumptions allow people to believe that a good idea or program that is tested, validated, and attractively packaged will be implemented unaltered in many different locations.

Many educators are not comfortable with these assumptions. Their experience tells them that teachers who willingly and enthusiastically choose to introduce an innovation into their classroom will probably be more effective in promoting student achievement than those who would rather not change what they are doing. Further, even in a single district the students, faculty, and activities differ widely at various schools. It is difficult to predict how each school will respond to a change introduced from outside. Finally, schools are not simply collections of autonomous teachers and students. Rather, they are organizations that have many patterns of interdependence and interaction among individuals and groups. An innovation is introduced into an organization as well as into classrooms. It is unlikely that an innovation will remain unchanged as it is incorporated into the school's organizational structure and its classrooms.

In summary, the technological perspective emphasizes the adoption of rationally developed innovations. Knowledge is seen as technical and readily implemented by a technician. Both the change process and its outcomes are predictable and can be transferred across a variety of educational settings. Certainty and predictability prevail if the innovation is technically sound.

The Political Perspective

The road to educational change is not always smooth, populated only by those who are agreeable and supportive. Rather, an innovation may inadvertently introduce politically motivated interactions and negotiations. Another view of innovation provides a look at the conflict, power struggles, and political bargaining that occur within schools.

Schools are organizations with power structures and a hierarchy of authority. Power struggles, which flow from this system of authority, occur because individuals and groups compete for greater influence

within the organization. The introduction of an innovation can also upset the balance of power. Changes carry with them implicit threats, suggesting a possible disruption in the existing power structure. Thus, innovation is sometimes resisted for political reasons.

The political perspective considers factional groups that are vying for power and influence in an organization. Such groups may be composed of teachers, administrators, parents, students, or professional associations. Conflicts may arise among these stakeholders as a result of educational change. Bargaining or negotiation may lead to a compromise that the conflicting parties will accept. Cooperation, then, is a result of negotiation rather than being an automatic condition in schools.

Many attempts at innovation have had strong political overtones. For example, desegregation remains a hotly contested educational change, despite its 25-year legal mandate. Opposing interest groups work to protect their opinions and power, often requiring a judge to arbitrate a compromise. Bilingual education provides another example of conflict in response to an innovation. Some educators believe that bilingual/bicultural education is not the responsibility of the schools. Even bilingual advocates themselves often cannot agree on the purpose of bilingual education. Some advocates believe that it should serve as a transition to classroom instruction entirely in English. Others argue instead that the native language and cultural heritage should be maintained rather than being phased out once English is mastered. These groups oppose each other in schools and communities and in legislatures and courts. As with desegregation, the political conflicts at work in the bilingual education arena continue to influence policy and practice.

Probably everyone in education can pinpoint local political struggles similar to those described. Wherever people, groups, or organizations diverge in their special interests, conflict, negotiation, and compromise are likely to ensue. Cooperation does not always emerge, especially when an innovation affects the school's power structure.

Other political issues may arise from the relationship between the school and the community it serves. Some schools interact frequently with their environment; others withdraw from it. Both strategies have advantages and disadvantages, depending on the situation at the time. Schools are, in one sense, owned by their environment. Supported totally by public dollars, they are vulnerable to citizen pressure. In order to reduce this vulnerability, schools may build barriers between themselves and outside influence groups. Sometimes these barriers serve a positive purpose, allowing schools to concentrate on the education of students. At other times the barriers lead to isolation and stagnation. Common ways that schools buffer themselves from their environment are these:

- "Red tape" is used as an excuse not to be responsive to people outside a school or district. Often a suggested change is turned down because "the rules don't allow it" or "we don't have the right procedures to handle it."

- External pressure can be neutralized by including the most active opponents in the school's decision making process. Sometimes these opponents become supporters of the innovation, working for it rather than against it.

- "Experts" can also be brought in to strengthen the school's posture toward the innovation. If the school wants to convince others that the change is either wise or wasteful, expert opinion can usually be found to support a predetermined position. Using outside testimony in this way can reduce the influence of lay opponents who lack comparable expertise, or of educators who lack expert stature or credibility.

Another way of applying the political perspective to schools is in analysis of the national, state, and local educational structure. Schools are part of a massive, complex system that is difficult to change. Schools must answer a host of political demands from agencies at all levels, which sometimes demand contradictory action by local educators. Regulations, paperwork, and other requirements imposed on schools sometimes become overwhelming. Yet local educators can rarely refuse to cooperate with other funding agencies and programs; they need the resources and support to survive.

To summarize, the political perspective focuses on the people, groups, and organizations that have a vested interest in educational innovation. These stakeholders are often in conflict with each other as to whose influence will prevail. Disagreements are commonly settled through bargaining and negotiation. Schools cannot ignore outside pressure, since their funding sources are public. But with an understanding of the political realities they face, schools can still innovate in ways that are compatible with existing group and community preferences.

The Cultural Perspective

Schools may be viewed as collections of people with shared meanings, values, norms, and codes of behavior. These accepted attitudes and assumptions about the culture of the school influence how people perceive and interpret new ideas or information. In addition, the school as an organization can shape the cultures within it and, at times, even force compliance.

Every culture has numerous subcultures, each of which may view innovation differently. Different groups tend to place their own values and meanings on an innovation, supporting it or opposing it according to their belief system and their experience. The cultural perspective suggests that educational change requires the interaction of separate subcultures, which may or may not be willing to cooperate. Group values vary, as do styles of resolving conflict. Ultimately the cultural context, composed of somewhat divergent subcultures, can

be a source of planned and unplanned consequences that influence educational change. From the cultural perspective the results of innovative activity depend on how it is received by the subcultures involved, rather than on technology or political factors.

The cultural perspective acknowledges that the context into which a change is introduced can determine its success or failure. Schools are inhabited by insiders with unique points of view about what the culture of the school is or ought to be. Numerous different subcultures exist within schools, among them students, teachers, and administrators. There may also be various student or faculty subcultures, or a separate subculture of community members. These subcultures may be more united for the common purposes of education than they are divided by their different values and interests. For instance, some students, teachers, and administrators may be united on one issue, whereas a different group of students, teachers, and administrators may share a similar viewpoint on another issue. Innovations that reinforce one or more subcultures are usually more positively received by their members than innovations that violate existing values and norms.

Sieber's discussion of incentives and disincentives inherent in educational innovation is pertinent here. Subcultures in the school may have varying predispositions to seek certain rewards and avoid certain costs. For instance, from the perspective of a teacher, mainstreaming handicapped students into the classroom may represent a considerable additional expenditure of time and energy. Even though some teachers may fully understand the social and educational benefits of mainstreaming and individualized student instructional plans, they may feel overwhelmed by the implicit costs and demands. The parents of handicapped students, on the other hand, may believe that for the first time their children are receiving adequate educational consideration and social experiences to help prepare them to function as adults. They may see many rewards in such a program and few, if any, costs.

Miles suggests that, depending on the issue and the school itself, the subcultures or groups that influence decision making can vary. For instance, teachers in an elementary school that features a democratic principal, open classrooms, and individually guided instruction may take part much more frequently in building-level decisions than those working in a more traditional school with self-contained classrooms and a more autocratic principal. Furthermore, principals in both schools may make unilateral decisions or use participatory management strategies if a given issue seems to warrant such action. Students usually have the least influence in school decision making, even on issues such as rules for student behavior where they might be expected to have a voice. Thus, the roles and activities of subcultures in the school vary considerably from one school to the next or from one issue to the next.

Common properties of schools cited by Miles also are significant in light of the cultural perspective. Schools tend not to be

interdependent; rather, each building is relatively autonomous, acting independently of others in the district. Even if the same textbook is adopted district-wide, the way teachers use it will vary with the school and the individual teacher. Schools are owned and supported by their community. They need not compete extensively for resources with other schools in the district. This situation may reduce teacher and administrator incentives to innovate. Clearly, therefore, the subcultures in a school are influenced by various generic characteristics of schools.

An obvious message from the cultural perspective is that the process of innovation is adaptive. Change happens slowly because any new educational idea or methodology must be modified to be consistent with the culture of the school. Faculty want to take part in deciding on their responsibilities and in defining their work. Because teachers are the individuals most influenced by innovation, they expect to influence it in return. Those standing outside the culture of the school, such as legislators and federal or state agency staff, are unlikely to be sensitive to meanings and values shared by local participants. The innovations that policymakers mandate or researchers develop must be adapted to fit the culture of the school. The greater the need for adaptation, the more slowly change occurs.

The cultural perspective, then, focuses not on new technologies, conflict, or political bargaining, but on the context of the innovation. It suggests that shared meanings and values of subcultures in the school predominate over the content or politics of the innovation in context. Innovation is seen as an adaptive process because the changes introduced must be made compatible with the culture of the school.

To summarize, it is unlikely that people consciously switch from one perspective to another based on what they feel is most appropriate at the time. On the contrary, the use of one or more perspectives to understand school situations is so intricately woven into the entire sensemaking process that it is often difficult to recognize. Perhaps as people become more aware of the alternative ways they can perceive the process of educational innovation, they will be more conscious of which perspective is appropriate and under what circumstances.

Highlights of the three perspectives are presented here:

- The technological perspective suggests that the process of innovation is logical, systematic, predictable, and controllable. Teaching is viewed in a technical frame as a mechanical activity. Schooling is a technique built on the notion that instructional activities add up sequentially to lead to student learning. Because of this certainty and rationality, innovations can be adopted intact from one school to the next.

- The political perspective emphasizes power struggles and bargaining among competing coalitions or interest groups. Change might be resisted because it challenges the existing power structure in the

school. Resistance may also emerge if an interest group judges that an innovation will undermine its power or credibility. From the political perspective, the process of educational change is the result of negotiation between interest groups with divergent interests.

- The cultural perspective focuses on the values, norms, and shared meanings held by different subcultures in the school. These subcultures respond to an innovation in accord with the culture of the school and community and in terms of issues raised by the innovation. Even within a subculture disagreements can arise. Sometimes individuals from various subcultures, such as faculty and central office staff, unite around a common cause rather than remaining within the boundaries of their single group.

SECTION II:

THE DYNAMICS OF EDUCATIONAL CHANGE

Introduction

Section I presented three perspectives on the process of innovation These viewpoints provide an abstract, global picture of educational change. Section II is more specific, discussing organizational and individual factors affecting innovation in schools.

First come the characteristics that Matthew Miles has identified as being common to most elementary and secondary schools, along with the dilemmas these organizations face as they go about the business of schooling.

The rewards and sanctions that accompany educational innovation point up another influencing factor. Sieber argues that most change efforts in schools involve both costs and benefits to students, teachers, administrators, and the community. Sometimes one group's perspective is dominated by rewards while another group notices predominantly the costs of innovation. At other times individuals or groups see both the costs and the benefits of modifying what they do. The dynamic interplay between these incentives and disincentives is the theme of Sieber's work.

Berman discusses another kind of dynamic interplay--the interaction between the innovation and the setting into which it is introduced. He argues that when a change is implemented, a process of mutual adaptation occurs. This process involves alterations in both the innovation and the school context in order to create the best fit possible between the two.

The Common Properties Of Schools

Matthew Miles suggests that a number of features may be so commonly found in American elementary and secondary schools that they might be considered inherent, generic properties. Miles has studied such claims, examining the actual evidence that these properties are present in schools. He finds that in some cases the evidence is far from clear or conclusive. In this context, six common properties of schools are described here:

1. Vague goals--A school district's mission can consist of goals that are abstract, broad, inconsistent, and sometimes in conflict. This situation creates difficulty when schools are

held accountable by the public for showing specific, measurable outcomes related to their overall goals. For instance, although educating students to be good citizens is a worthwhile goal, measuring progress toward that goal is difficult.

2. Weak technology--The knowledge base that influences educational practice is often inadequate. There are no clear guidelines, for instance, when individualized instruction is preferable and when group learning will probably be more effective. And even when research provides new insights into the process of teaching and learning, this information rarely affects classroom activities.

3. Coordination problems--Because school staff are autonomous in many respects rather than interdependent, coordination of district activities and programs is difficult. Instructional and administrative functions are seldom closely related to each other. Control over who makes what decisions can vary, with teachers determining their own daily lesson plans and having little influence on administrative decisions such as staffing and allocation of resources. Many school activities are only indirectly related to educational goals and go largely unmonitored. Yet in other ways (e.g., class scheduling) schools are very closely coordinated.

4. Relationship with the community--Schools are vulnerable to local citizen pressure because of public financing. From the inside, schools seem to be too much at the mercy of community group pressure. From the outside, schools appear to have established protective barriers to citizen influence and public opinion.

5. Guaranteed survival--Public support for education has assured schools a continuing, non-competitive existence. This financial security supposedly lowers incentives for innovation and lessens the pace of educational change. Some see schools as being rigid, routinized, bound by tradition, and threatened by significant innovation. On the other hand, a case can be made against such claims. A wide range of innovations has been implemented by elementary and secondary schools over the past two decades, ranging from desegregation to individualized instruction. It has been suggested that established professional innovators or change agents have a vested interest in maintaining the myth that schools change slowly, because otherwise their work would seem unnecessary. Neither perspective on rates of school change has been proven.

6. Complex educational system--Education agencies from the national to the local level are interconnected in a decentralized structure. State and federal agencies exert clear constraints on local schools. Furthermore, other organizations and structures affect schools: the legislative, judicial, and political systems; professional associations; materials and test producers; and accrediting and certifying bodies. Because this array of organizations operates in the educational arena, governance of local schools is shared on a de facto basis with groups at all levels of government and in the private sector.

Dilemmas Faced By Schools

In addition to the common properties summarized earlier, schools face a number of tensions or dilemmas--choices between two equally desirable alternatives--created by opposing forces. Miles has examined nine dilemmas, four of which are explored here. (The other five discussed in Improving Schools are: core task focus vs. "survival" emphasis; diversity vs. uniformity; environmental dependence vs. autonomy; environmental contact vs. withdrawal; feedback-seeking vs. intuitive/routine action.)

Dilemma: Coordination vs. Flexibility

Schools are social systems composed of smaller units and groups of individuals, such as teachers, administrators, and students. Tension arises whenever administrators consider whether or not these groups should be closely controlled or flexibly autonomous. A number of factors influence this tug-of-war between coordination and flexibility.

- Teachers and administrators have separate zones of influence within the district. Both groups try to influence decisions and activities to serve their best interests, whether or not the interests are compatible with each other. Teachers and administrators seem to agree that they have separate jurisdictions for different decisions and that these jurisdictions do not overlap very much.

- Teachers have considerable autonomy in their own classrooms, as do principals in their own schools. Stable routines for the operation of schools reduce some of the uncertainty resulting from the relative freedom of individual teachers and administrators. Thus, this low interdependence does not lead to anarchy or totally unpredictable behavior within the district.

- There is little surveillance or centralized control over activities in schools and classrooms. School districts are managed on the basis of confidence and good faith rather than on close monitoring and control.

- Teachers tend to be isolated from what occurs elsewhere in their building and district. They spend most of their day pursuing the "solitary" activity of helping students learn in their classrooms. They are not really solitary, of course--just out of touch with other adults.

- Schools seem to be held more accountable for keeping students under control and in attendance all day than they are for teaching students while they are there. This custodial function sometimes overshadows instructional innovation.

- Regulated advancement of staff through a standardized salary structure tends to discourage faculty participation in risky and

time-consuming innovations. Exceptionally good teachers and administrators are rarely rewarded, and exceptionally poor ones are rarely punished. Because an individual's willingness to innovate is usually not recognized by means of a higher status or salary, many people decide that it is not worth the effort to try something new in their schools or classrooms.

Dilemma: External Expertise-Seeking vs. Self-Reliance

When schools need assistance to solve a problem, motivate staff, or identify new trends and practices, they must decide whether to look inside or outside for help. Four factors affect the tension between depending on local resources and using external expert sources.

- Teachers consistently rate other teachers as the highest source of information and assistance. They infrequently use formal external resources, such as outside consultants and information systems like ERIC. Locally available expert information, however, is often tapped by staff members.

- Incentives for the use of information, whether generated internally or externally, are not always related to decision making or problem solving. Other catalysts for seeking new knowledge are the desire for enlightenment, motivation, inspiration, power, prestige, and relief from boredom.

- Even though educators are considered by many to be professionals, they often have inadequate information to do their work. Instructional practices are based more on common sense and experience than on research about the teaching and learning process. Teachers rely on their own resources for most classroom activities.

- Although externally developed educational innovations are widespread, they may offer only a marginal advantage in the classroom. Thus, they tend to be taken less seriously than informal, locally developed ideas or programs.

In sum, tension exists between those who prefer to use local resources and creativity and those who would rather rely on outside people and materials for assistance. Section III offers a more detailed discussion of this dilemma.

Dilemma: Centralized vs. Shared Influence

Central office staff and principals sometimes must answer this question: "Should leaders control decision making or collaborate with their subordinates in the process?" Numerous considerations affect responses to this query.

- Students are subordinates with extremely low influence in the educational system. Their preferences and wishes do not carry as much weight as do those of other stakeholders such as faculty and parents.

- The authority structure in a district is not the same for all decisions. The degree of decision control maintained by top administrators varies with the issue at hand. Sometimes the Board of Education decides; sometimes each school building sets its own policy.

- School principals have much power. Thus, power does not necessarily increase with a move from the principalship to the central office. A district project director may have less power than a principal, even though the position is at the district level rather than at the building level.

- Unionism and more frequent faculty participation in decision making have increased the power of teachers. They are no longer willing to relinquish some of the control over district policies affecting their rights and responsibilities.

- The implementation of change is often supported when administrators and teachers share decision making. Participation in the decision process can increase individual ownership in a new program or policy and enhance the likelihood of success, but many exceptions to this generalization can be found. Comprehensive or administrative changes involving simple, well-structured innovations may be more easily implemented from the top down. Complex instructional innovations, or those depending on a strong component of professional competence, require shared influence.

Dilemma: Change vs. Stability

Many educators assume that something new is better than what it is designed to replace. Innovations are expected to result automatically in school improvement. But new ideas or products have not always proved to be fail-safe. Through experience some teachers have decided to keep doing what works for them rather than experimenting with uncertain innovations. This tension between change and stability is influenced by a number of factors:

- There are few incentives for schools to adopt innovations, especially considering the risk involved in such activity. One reason for trying something new is to appear to be more up-to-date, whether or not the innovation actually changes individual behaviors or classroom activities.

- Innovations rarely are left untouched when they are used by local education agencies. Schools usually modify the innovation to make it more compatible with the local context. Although replication is possible, faithful adoption of innovative programs is unusual.

- Innovation in schools supposedly occurs slowly because decisions are often made on the basis of tradition. In spite of this preference for the "tried and true," educational change is being accomplished in many schools today, especially where change processes are thoughtfully planned and managed.

- Routines established by the school district weaken its capability for internal change. Few schools have strong, built-in change mechanisms (inservice training, organizational development, etc.), but they can be developed.

- Resources for change developed outside the district have been expanding, offering schools a broader selection of innovative alternatives.

- An established group of educators who support educational change has emerged during the past decade. Disseminators, linkage or change agents, and information systems or networks have been developed to support innovation. Because there are so many specialists with responsibility for supporting educational change, innovation is likely to continue.

- Though educational innovators or change agents believe they encounter frequent resistance to their proposed alterations, change may indeed be widespread in schools. Incremental modifications are made daily by teachers in their individual classrooms. These changes are informal and often go unnoticed. Thus, when people assess innovation (defined as formal program adoption), they may conclude erroneously that instructional strategies used in the schools are static.

To summarize, schools have a number of common properties that influence the way they view innovation. In addition, a number of tensions in schools are caused by opposing forces. Four such dilemmas facing education today are coordination vs. flexibility, external vs. internal expertise, centralized vs. shared influence, and change vs. stability. The way each of these tensions is addressed by schools depends on the local context.

Now it appears evident that a deeper understanding of school systems themselves can influence our view of educational improvement. The perspectives discussed in Section I are not the only way of making sense of the world of education. Schools are far more complex than once realized; as is the case in other large organizations, the path to improvement is riddled with dilemmas. It seems appropriate to ask:

- How do schools respond to mandates and decisions from state and federal agencies, knowing that local participation can be critical?

- When are locally developed solutions to problems inadequate, requiring that outside expertise be sought as a stimulus or support for innovation?

- A coordinated, district-wide effort usually provides more support for innovation. Yet how can this coordination be made to work without threatening the differences among schools and their needs for autonomy and flexibility?

- Problems resulting from social changes pressure schools to look for innovative solutions. How do the vulnerability of school personnel, the lack of adequate technology, and the risky nature of educational change influence the school improvement process?

The ways educators deal with these dilemmas have much to do with sensitivities to constituent groups, the proposed changes, and organizational and political realities. Educators thus acknowledge the existence of commonalities and dilemmas in schools. They come to understand that even when schools seriously attempt innovation, there are still the real constraints of limited budgets and the lack of clear technical and practical responses to legitimate social pressures.

The Rewards and Costs of Educational Change

The organizational life of the school involves many factors that influence the process of innovation. Stable or stagnant routines and traditions sometimes serve as barriers to change. Interest groups with conflicting demands may impede the implementation of an adopted innovation. Or a new program might be rapidly integrated by the staff and students if it strengthens existing values in the school's culture.

Another way of explaining organizational life is to look at the rewards and costs that affect the change process. Changes have personal and organizational costs associated with them. Sam Sieber considers this topic in his article called "Incentives and Disincentives for Knowledge Utilization in Public Education." These factors are related both to existing organizational dynamics and to individual norms and values. Unique conditions in each school shape the rewards and costs that are identified with a particular innovation. A new idea that would be encouraged and rewarded in one school might be blocked in another school if it created difficulties for those who participate in it.

Both incentives and disincentives for change exist in schools. An incentive is an intrinsic or extrinsic motivation to do something. There are both positive and negative incentives. A positive incentive can best be thought of as a "carrot," a reward for participation in or compliance with a program or activity. A negative incentive is more like a "stick," or an aversive inducement to participate or comply.

Incentives can take the form of "carrots" ("This innovation will benefit or improve what you do") and "sticks" ("If you don't introduce the innovation, you will be missing an excellent opportunity"). The same is true for disincentives. Rejecting or refusing an innovation may be rewarded (the "carrot"), and participating in innovative activity may result in ostracism by colleagues or closer supervision by a supervisor (the "stick").

As the staff of a school proceeds through the stages of the change process--from initiation through implementation and on to institutionalization--incentives vary. The inspiration that initially motivates a teacher to try out a new idea may not be enough to keep him or her involved after discovering that materials must be altered significantly for effective classroom use. The financial incentives of receiving federal and state funds to improve educational programs may fade when extensive reporting and documentation (disincentives) come due. Educational innovation is made even more coplex, then, because rewards and costs vary with the stages of the change process.

Many teachers feel that their greatest intrinsic reward is in helping students learn. Job satisfaction comes with knowing that individual teaching efforts are worthwhile. These rewards are so important that teachers will usually support a change which shows promise of increasing student achievement and resist one which does not. Whether they initially support or oppose the change, teachers will actively adapt an innovation to conform to their unique classroom environment and to student instructional needs.

Three important incentives for the use of new knowledge in schools have been identified. Practicality, self-interest, and enlightenment are described briefly.

- Practicality--Knowledge utilization serves the practical functions of helping teachers avoid negative activities, sidestep pitfalls or barriers to action, and keep current with new educational trends or developments.

- Self-interest--When information is used to provide support for an existing activity or a decision about to be made, it serves the self-interest of those in favor of the decision. Knowledge can also be used to support an opinion in a disagreement or to satisfy curiosity about a question or a new development.

- Enlightenment--Knowledge utilization often fosters increased awareness of the results of educational research and development. It can provide deeper understanding of an issue, problem, or process. New information can also be used to excite and motivate people, increasing their commitment to an innovation, idea, or ideal.

An educator's satisfaction with information sources is also closely related to enlightenment. The two most important benefits of information have been reported to be, "I learned something new" and "It gave me new resources for helping other staff members." Teachers and administrators seem to prefer specific information that prescribes "how to" applications of new approaches in their work. When innovative products do not fit the school context, they are either modified or supported by additional locally developed materials.

What kinds of school settings provide greater opportunities and incentives for knowledge utilization? Ideally, eight conditions should

exist in schools to encourage the use of new ideas by the staff. Although these qualities describe an optimal educational environment, they bear consideration.

- A cosmopolitan orientation supports experimentation and willingness to innovate.
- Informal authority among teachers and administrators exists in a simple organizational structure.
- Faculties have autonomy.
- The principal's leadership encourages knowledge utilization.
- Collegial communication is actively pursued among the staff.
- Individuals are rewarded.
- Rewards are applied consistently and often.
- The costs of participation in an improvement effort are compensated for in some way.

To summarize, there are numerous rewards and punishments for participating in an educational innovation. These incentives and disincentives vary as a school staff moves through various stages of the change process. Three primary incentives for the use of new knowledge in schools are practicality, self-interest, and enlightenment.

Moving Away From The Technological Mindset

Assumptions about educational innovation as a process of technological improvement dominate much of the thinking related to school improvement. Many believe that if teachers had better technical products to use in classrooms, student achievement would be improved. How well does the technological perspective measure up to what actually happens in schools?

It has been argued that the technology of education is weak. Teaching techniques are sometimes based on inadequate knowledge about the instructional process. Some faculty members have insufficient knowledge and training to provide high-quality instruction. Few teaching techniques relate totally to individual learner needs, and group instruction of students predominates. As a result, even if there were sufficient resources to offer the highest quality of instruction, educational technology could not support it.

Not only does the technology seem inadequate, but educational goals are often unclear and difficult to measure. Goals tend to reflect educational values more than pointing toward quantifiable outcomes. Consequently, there is only a loose connection between overall goals and actual classroom instruction. Coupled with the inadequate technical quality of available educational resources, unclear goals tend to discount many assumptions underlying the technological perspective. If technology does not chart the process of innovation, then what does? Educational change is often dominated by what happens after an innovation has been introduced into the school. These local events cannot

be accurately predicted by looking at the technology itself. In other words, it is difficult to determine in advance the results of a change effort by looking at the new materials and products being used.

Adaptation of the innovation rather than wholesale adoption occurs most of the time. When a change is introduced into a school, it interacts with the people and processes that are already there. Usually individual behaviors and organizational routines are then modified, along with adaptations made in the innovation itself. In this way local stability can be maintained while some aspects of the educational process are improved. The notion of adoption, then, is unrealistic because it assumes that everything but the innovation itself must change. This is rarely the case.

The process of innovation carries with it numerous incentives and disincentives. For many reasons teachers and administrators do not jump at the chance to try something new. What are some advantages and disadvantages of innovation?

- Change introduces uncertainty and risks into the school. Staying with what already works, even if it is marginal, might seem preferable to risk and possible failure.

- Change requires significant amounts of time and resources. If one program is changed, others may not have needed access to staff and money. An innovation might have a detrimental effect on other programmatic areas.

- The local school context may not support the change. Conflict may cause time, energy, and resources to be diverted from the innovation, whereas early compromise or consensus can speed its implementation.

- An unclear decision structure in the school could stall progress toward innovation. Various groups, such as teachers, administrators, parents, and board members, may feel they have a legitimate right to influence decisions about educational innovation. This situation is even more complicated if the school has not specified who is involved in decisions, to what extent they can be, and when it is appropriate to do so.

It appears, then, that the technological perspective assumes contextual conditions that do not always pertain. Section I described some alternative ways of making sense of the process of educational innovation. A description of the actual process or stages of educational change as it occurs in many schools should be helpful at this point.

Mutual adaptation is the central theme of Paul Berman's analysis of the change process in his article "Toward an Implementation Paradigm of Educational Change." It emphasizes the interaction between the innovation and the setting into which it is introduced. Both need to be adapted in order to enhance the compatibility between the new program and the context that incorporates it. Schools are organizations

with many established routines. Innovative activity alters these routines and subsequently modifies the organization.

Three subprocesses characterize innovation through mutual adaptation. Briefly, they are:

- Mobilization--Here an image of the anticipated innovation is created, made into policy, and communicated to others. Some responsive planning also occurs in this phase, along with activity to obtain internal and external support for the innovation.

- Implementation--Each school follows a slightly different process as it implements changes. Implementation can be viewed as a process involving the adaptation of both the innovation and the setting to enhance the compatibility of the two. If classes of innovations and types of schools can be identified, contingencies might be developed that define the nature of the change and predict its effect on the overall educational program.

- Institutionalization--During this phase the changes introduced by the innovation become organizational routines--a standard part of daily activity. Both context and timing influence the outcomes of the change process. The same technological innovation introduced into two different schools at different times can have different results.

Successful educational change is not totally a function of the quality of the new technology. Existing technologies are sometimes weak because they are based on incomplete information about effective instructional strategies. But even if a high-quality innovative product is selected, it is usually altered to become more compatible with the school context. Educational change processes are complex, uncertain, and unpredictable. But a lively and flexible interaction between the product and its setting can result in significant school improvement.

To continue this review of educational innovations, the complexity of school systems themselves, and the dilemmas that emerge when new ideas come into schools, Section III will discuss how people in various educational roles can contribute to innovation. The section will consider what motivates teachers about their work and what the process of innovation looks like:

- How is innovation introduced into schools?
- What ideas are salient to teachers?
- How are new ideas made practical for classroom use?
- What are the tensions between innovative concepts and school and classroom realities?

SECTION III:

THE ROLE OF OUTSIDERS AND INSIDERS IN THE SCHOOL CHANGE PROCESS

This section reports on the findings of recent studies addressing how people inside and outside the school can support educational innovation. Two papers were used as sources: "The Role of External Agents in Knowledge Utilization, Problem Solving, and Implementation of New Programs in Local School Contexts" by Karen Seashore Louis and "The Role of Human Agents Internal to School Districts in Knowledge Utilization" by Michael Fullan.

The distinction between insiders and outsiders is in a sense artificial, based on whether or not the change agent is an employee of the school district. Instances can be cited when innovators from outside the district have developed such a close working relationship with school staff that they are considered essentially insiders. By the same token, central office staff who rarely work with school faculty may have so little credibility that they are treated as outsiders. Thus, one way of defining insiders and outsiders is in terms of social distance from their clients rather than their organizational affiliation. Here the latter definition is used, though the former is deemed equally credible.

Outsiders

The role of external change agents (to be referred to here as outsiders) in the school change process should be viewed and defined from the perspective of those who seek and use their assistance. That is, outsiders who undertake to help a school or district introduce an educational improvement serve at the pleasure of the local school system. It is therefore necessary for them to adjust their roles to local expectations if they are to be in any way effective. Studies of the change process bear out this conclusion in at least three ways:

- Successful outsiders take time to negotiate exactly what services they will provide.
- School administrators exert as much influence on what an outsider does as the outsider's superiors or the program policy of his or her employer. Sometimes administrators exert more influence.
- Successful outsiders use feedback from clients to adapt their strategies and role definitions to the local school situation.

User values may differ so substantially from helper values that conflict and even failure can result. For this reason, it is important for agencies that employ outsiders in change efforts to communicate clearly to potential users the values on which their assistance is based. Two sets of factors affect an outsider's impact on a local school or district: (1) the change agent's past experience and personal characteristics--what the outsider brings to the job; and (2) agent strategies--the approach and methods used.

External Agent Characteristics

In the past, it was assumed that the chances for success of a school change effort would be enhanced if the work were carried out by a team composed of an outsider and an insider. An effective outsider was supposed to have held a position similar to that of those with whom he or she would be working. That is, former principals were believed to work best with principals and former teachers with teachers. However, though former teachers, for example, do seem to gravitate toward the teachers in client schools, this preference does not affect the amount of time they spend with other staff. It is also possible for outsiders to identify too closely with their clients and allow their regard for local values to overshadow the problem they came to solve. This error is most likely to occur when the problem calls for a solution that threatens the status quo. Ultimately, the outsider must have local credibility if the information and advice are to be used. A good source for such credibility is shared experience. This notion should not be taken to mean, however, that outsiders who work in classrooms with teachers necessarily must have classroom teaching experience in order to be successful.

Most districts have a complex internal structure that plays a significant role in the circulation and use of new information within schools. Schools are so loosely organized that it is relatively easy to go one's own way, whether one wishes to change or to preserve the status quo. This loose linkage that characterizes school organization also makes large-scale and highly focused change difficult to coordinate.

Outsiders are often considered to be critical to the success of innovative efforts in schools. The insider who seeks to promote change may know just as much as the outsider, but for others inside the school, the outsider's information may be viewed as "expertise," whereas insider's is merely "common sense" or "intuition."

Outsiders appear to be more effective at some stages of the change process than at others. They seem to be most successful at the outset, when the planning, motivating, and initial introduction of changes in classroom practice occur. Outsiders are also well suited to provide the follow-up help that is needed when problems are encountered during implementation of the innovation. There are two reasons: (1) the outsider has less of a personal stake in the local situation; and (2) the outsider's view of the local situation is usually more objective, clear, and uncluttered, even if at times incomplete.

Nevertheless, it is also true that the most effective outsider is someone who has an insider in his or her corner--if only to provide entree and insights into the people and politics of the local school district.

External Agent Strategies

Three factors influence the effectiveness of an external agent's choice of strategies: the distance in frame of reference between client and agent, the complexity of the information and advice to be conveyed, and the number of people to be reached. The strategies that may be devised by external agents vary along four dimensions:

- initiative--the amount of effort needed to reach the intended clients;
- intensity--the degree to which the relationship between outsider and client resembles a relationship between peers;
- expertise--the technical qualifications that the outsider must have in order to provide accurate information;
- scope--the number of people who can be reached with existing resources.

Initiative is the amount of energy and effort that a helping agent needs to use in order to reach existing or intended clients. The initiative required of any helper is defined by the policies of his/her employing agency. For example, outsiders with a reasonable number of potential clients can use high-initiative strategies if they are encouraged by their organization's policy to visit schools in person. Outsiders cannot use such tactics if their potential clients are extremely numerous or spread over a wide area, or if they work for an agency that prefers to allow potential clients to come forward of their own accord.

Outsiders who offer a new service must work hard to stimulate interest among school staff. Initially, the external agent should meet individually as often as possible with those who have been identified as appropriate users of the information and advice that is offered. Innovations publicized as research-based are especially hard to promote, since research is held in low esteem by many teachers and principals. Other kinds of innovation, such as teacher-developed programs or materials, require less effort to introduce. In such cases outsiders should see clients as often as they can, either individually or in groups. Some innovations are complete packages or tested solutions to a particular local problem. Others aim to promote enlightenment among school staff or build capacity to improve schools. In the latter case, the agent will have to make greater efforts, because the benefits are not immediately visible. But when a product or service has demonstrated its effectiveness over time and many people recognize it by name, less initiative will be needed to reach the typical teacher or school.

The initiative that an outsider must take to stimulate people to use the information and advice provided is also influenced by the characteristics of individual schools. Some schools will write or phone an outsider on their own, asking for assistance in solving particular problems, in keeping up with current issues, and/or in building their information-gathering and problem-solving capacity. Other schools will not ask an external agent for help. Reaching schools of the latter sort requires the outsider to make a special effort. In situations where repeated face-to-face communication is not required to reach clients, an outsider can delegate some tasks to insiders who are committed to innovation.

Intensity describes both the length of time during which an agent maintains a relationship with a client and the amount of time that the agent devotes to it. Outsiders spend more time in schools when the information they provide is used extensively. In some cases, particularly where inservice training for staff is involved, too little time spent on support activities is worse than no time at all. Inadequate or irrelevant staff development programs can result in a negative attitude among faculty toward innovation. Intense involvement by outsiders is not particularly useful in three situations:

- in institutionalizing an innovation;
- in training activities that use a highly structured, inflexible agenda;
- in promoting innovations that are not clearly related to content.

The local school context also affects the intensity of the effort that an outsider must make. The agent need not work so hard if a school is ready for change, whereas intense effort will have little effect if a school is not ready for change. Generally speaking, an outsider will always have to do more to support change in a large school or district.

A number of descriptions of school improvement efforts suggest that the intensity required of outsiders is related to the stage at which they step into the change process. If the outsider brings information and advice pertinent to a particular problem, more intense involvement with school staff influences whether the information will be used when it is needed. For this reason, outsiders who assist clients in decision making should step in near the end of the problemsolving process. However, if the outsider's objective is to build capability, intervention in the early stage is critical. At that point teachers and administrators are most open to extensive consideration of innovation, implementation processes, group dynamics, and so forth. When educators begin to implement a new program, their attention often turns toward the technical details required to introduce it into classrooms and away from building capabilities.

Expertise consists of the specific qualifications that justify an outsider's involvement with local schools. External agents are often expected to be experts or specialists. Perhaps because of such expectations, some state and local educational service agencies are increasing the number of specialists they employ. Specialization

can focus on either content expertise or process expertise. A content expert is a specialist in a discipline or an information-based activity, such as reading, vocational education, or science. A process expert has training in skills of group dynamics, organizational behavior, and problem solving.

People in schools have different needs at different stages of the change process. In the beginning, the emphasis is on interpersonal relations within the organization where the change is being introduced. But once people have become accustomed to the idea of changing, their interests shift to what they must do and how to do it. Thus, a process expert is usually more useful at the outset and a content expert during implementation. There is evidence, however, that a capable generalist can play both roles.

Scope is defined as the number of clients or schools that can be served by one agent at a given time. Many organizations that employ external agents make decisions about scope based solely on numbers, with little consideration of the kind or amount of assistance needed locally. This narrowness is unfortunate, because the need to work with a large number of schools can reduce an external agent's effectiveness in situations where high initiative in early activities is required. An increase in scope will compel the agent to decrease the time spent in follow-up activities that are critical to successful implementation. As a result, an agent's ability to provide effective technical assistance during implementation is greatly reduced if many clients must be served.

Insiders

The first part of Section III discussed the way outsiders provide technical assistance and expertise in support of innovation. Now it is appropriate to look inside the school district to consider the importance and role of teachers, principals, district resource staff, and superintendents.

Teachers

Because of their direct and sustained interaction with students, teachers are the focus of school improvement efforts. Even so, most individual teachers do not make much use of outside knowledge, whether it has been developed by researchers or by other teachers. First, the heavy teaching load keeps them in classrooms, where access to outside knowledge and incentives for using it are limited. Second, the traditional self-contained classroom isolates them from other teachers, inhibiting sharing and interaction. As a result, teachers tend to fall back on their own personal experience when faced with a potential change. Their encounters with outside knowledge are largely unplanned.

Teachers rely heavily on textbooks and instructional materials, personal notes and files, and face-to-face discussions with others inside their own school. In schools where teacher interaction is sanctioned and supported by the administration, teachers report other teachers to be "their most important source of help" in efforts to innovate. It is widely recognized that individual teachers can make or break a building-level or district-wide change effort. For this reason, teachers are often blamed if an innovation fails. However, it is only fair to note that in the vast majority of cases, teachers are asked to accept the benefits of a particular innovation largely on faith, often without regard for the costs to them in time, energy, and anxiety.

When an outsider or district-level staff person enlists teachers as a group in a change effort, two conditions must be met if the effort is to be a success:

- The suitability of the innovation to their needs, the action and effort required, and the validity and accuracy of the information conveyed must all be very clear.
- Intense, individualized, interactive, and continuous technical and psychological support must be available both at classroom and district levels.

Principals

Principals have far more access than teachers to outside knowledge. Principals identified by their staff as effective . . .

- draw extensively on outside sources for information and advice;
- place a high priority on instruction;
- constantly collect and process information about developments within their school;
- analyze the requirements of school staff and identify alternative courses of action;
- are strongly committed to a particular educational vision;
- satisfy the routine demands of their job in a way that permits them to spend most of their time on activities related to realization of this vision;
- take the initiative and provide leadership in their school building.

Though the duties and pressures of the job itself emphasize not change but maintenance of order and stability, and though principals sometimes have time for only a limited role in educational change, the principal's active support is clearly essential for the success of an innovation.

The principal provides the rewards and psychological support needed by teachers engaged in educational change. In addition, the words and actions of the principal indicate to those not directly involved in the innovation whether or not they should take it seriously. If the principal only generally endorses an innovation and allows individual teachers to decide whether to use it, many teachers will choose not to. For this reason, the principal who wants to promote an innovation . . .

- ensures that new teachers and reassigned teachers receive the necessary staff development support;
- visits classrooms;
- attends preservice and/or inservice training with teachers involved in implementation;
- assists teachers with instructional planning;
- frequently talks about students with faculty.

At schools where change efforts have been successful, principals have taken such steps as to . . .

- provide direction that encourages faculty participation;
- explain to regular faculty how the innovation benefits them;
- encourage participation in inservice training sessions;
- enable staff to visit other schools;
- obtain needed materials and equipment;
- shorten the school day twice a month to use the time for collaborative planning.

Studies show that principals display various distinct leadership styles and that these styles affect educational innovation. Some principals are managers and others are activists. Managers do not get personally involved with teachers who are implementing an innovation. They either delegate most responsibility to the faculty or make the major decisions themselves, leaving teachers on their own to include the innovation in their daily schedule. Activists, however, are concerned with supporting and helping teachers in their use of an innovation. They make it clear that the innovation is important, and they work with individual teachers on problems that may be encountered as the teachers attempt educational change.

Three types of leaders were identified in one investigation. Half the principals were "administrative," a third were "facilitative," and the remainder were "directive." Administrative principals are passive observers of the instructional process in their schools. They monitor what is going on, but they intervene directly in classroom activities only if a problem is visible. Facilitative principals become highly involved in teachers' curriculum decisions, taking a variety of active steps to organize and work with teachers. They establish priorities, even though they rely largely on teachers to influence other teachers. Directive principals decide by themselves to adopt an innovation and then attempt to convince teachers to accept it.

Administrative principals tend to separate instructional process issues from overall educational policy issues. They give teachers a large degree of autonomy to decide what to teach and how to teach it, but they make the decisions in areas that affect the school as a whole. They perceive their functions as distinct from those of faculty, identifying more with district management than with school staff.

Facilitative principals identify their role as that of providing support to teachers in the performance of their duties. More concerned with interpersonal processes than with organizational procedures, they perceive themselves as colleagues of their teaching staff. These individuals involve teachers in many aspects of the decision-making process.

Directive principals make all the instructional and policy decisions in their schools. They take great interest in factors that affect both the classroom (curriculum, teaching techniques, staff development, staff training) and the school as a whole (budgeting, scheduling). Such principals allow teachers to contribute to decisions related to classroom activity, but they retain the final decisive authority in all areas.

In schools with administrative principals, implementation of an innovation can be hit-or-miss. Sometimes faculty do not follow uniform classroom practices, or their teaching is inconsistent with program goals. Schools with facilitative and directive principals, on the other hand, are more successful. Directive principals are just as likely to achieve appropriate implementation of an innovation as facilitative principals, if they receive training in the philosophy and design of the innovation prior to or concurrent with its introduction into classrooms.

District Resource Staff

District resource personnel, such as the General Curriculum Consultant, Subject Area Specialist, Title I Director, or Special Education Coordinator, play numerous different roles. There is also significant variation in the organization of district resource staff. In some districts, specialists are considered administrators; in others, they are not.

The use that school districts make of such special staff also varies widely. District superintendents and school principals often decline the assistance of outsiders on the grounds that district resource staff can supply all the help needed. Nevertheless, the same superintendents and principals may not use district staff for this purpose. This omission is unfortunate, because district resource staff can significantly assist in the implementation and institutionalization of educational changes. Most staff development programs, for example, cannot anticipate the additional training that may be needed if an innovation produces problems in the classroom. In such cases, the most timely assistance comes from district resource staff. When difficulties in implementing an innovation are encountered, the quantity of assistance

given matters less than its quality. Effective consultants provide concrete, practical advice to teachers who are looking for answers to questions that they face every day.

District staff assigned to tasks requiring coordination, facilitation training, and other support must balance a large and precarious load of supervisory, administrative, monitoring, and consultative duties. This burden is especially apparent in smaller districts. Unfortunately, such overlapping responsibilities can make it difficult for district support staff to gain credibility as helpers and supporters. In addition, as currently organized, district resource staff spend a good deal of their time in one-to-one communication with individual teachers. Though teachers rate this kind of support as highly effective, this type of interaction sets limits on the number of teachers who can receive help from district staff.

Central office resource staff have proved most effective where districts have taken steps to organize and coordinate their efforts and to involve district support staff in systemwide planning. In such situations, district specialists . . .

- keep abreast of developments in research and theory and share these developments with school staff;
- meet frequently with small groups of teachers and department heads to exchange information and ideas;
- encourage grassroots innovation by doing research and preparing proposals for teachers and administrators.

Superintendents

The role of the district superintendent is critical for major change. Only top administrators can initiate educational innovations that involve new instructional and support staff positions, large outlays for instructional resources, and significant changes in the use of physical facilities, teacher time, and physical space. Though the initial interest in a particular innovation often does not originate with the superintendent, he or she must support and promote it actively if the innovation is to be successfully implemented.

However, as was the case at the building level, the superintendent who merely endorses a change does little to help establish it. Some superintendents become involved with innovative programs only to advance their own careers. Superintendents with opportunistic reasons for backing educational change neglect the follow-up activities required if the change is to become a regular practice in classrooms. Superintendents who do take an active and effective part in changing district climates and programs have done such symbolic things as . . .

- visiting every school in the district during their first year;
- speaking of teachers as "faculty";
- seeking teachers' ideas on changes needed.

More practically, however, these superintendents frequently demonstrate their own openness to change, and they create psychological and material incentives for teachers to initiate and participate in change.

Implementation increases as the number of areas in which the superintendent has final authority increases. This finding suggests that some amount of centralization is necessary to introduce change into all schools in a district. Although effective management of districtwide change requires an understanding of organizational dynamics and of the change process, many superintendents do not have these skills.

Team Approaches

The team approach, which involves a number of outsiders working with insiders, serves four purposes:

- it increases the resources available to schools;
- it increases the resources available to external agents, thereby reducing overload;
- it brings people together who work at different sites;
- it enables service agencies to supply the different kinds of expertise that schools need at different stages of the change process.

Perhaps no more than three outsiders should be involved in a single effort, however. Otherwise, teacher and school staff may have difficulty determining to whom they should take a particular problem. In addition, insiders are very aware of the costs of innovation in both money and time. Each person involved in the change effort adds to the the total expense and is likely to take teachers' time away from other activities. Nevertheless, the outsider can play a vital role in stimulating and supporting change-oriented activity if he or she is assisted by able local staff.

Some clarity in an otherwise chaotic picture begins to emerge. There are social pressures on schools. There are innovations, laws, and new policies that attempt to respond to these pressures. There are ideas, problems, and attempted solutions from the schools themselves. Whether innovations come from the outside or the inside appears to be less important than how the ideas, the people, and the dynamics between them are handled.

A sense of different ways of looking at the school improvement process and the dilemmas brought about by the introduction of change begins to emerge. An understanding of the roles of the significant people who help guide the innovation process also seems possible.

Some questions remain:

- Under what conditions are outsiders more effective than insiders?
- What combinations of people within the district and with what kinds of skills make school improvement possible?
- What forms of support are necessary at what levels?
- How does a team that includes both insiders and outsiders work together?
- Are there identifiable school-wide norms that interact with rewarded and sanctioned activiti ?

The answers to these questions are hinged on individuals and conditions in the local school context. Change processes are not transferable as a whole from one location to another. It is precisely because of the variability of each school situation that contributions of key individuals become so significant during innovation.

IN SUMMARY

Once again there is a need to recognize the complex nature of schools, the interactions between outsiders and insiders, the different perspectives educators hold, and the bumpy road that leads to school improvement. A bit more knowledge has been collected about the ways and means of approaching the social and political realities of school improvement. A number of those realities are summarized here:

- Different ways of viewing the change process underscore its complexity. Educators need to understand the innovations themselves, as well as the context and the perspectives of those who will ultimately use the new ideas.

- Innovations are introduced into schools where the system is already vulnerable to many social pressures. Problems of coordination are difficult because of the loose connections between classrooms and schools.

- With no clear answers, educators must understand and act upon the tension between change and stability. Sensitivity to the school's various constituencies, the changes, and the particular social system is essential. But each course of action will be different because situational factors vary.

- People may engage in innovative activity for many reasons. Such activities are both rewarding and costly. Because of the dynamics of the change process, these rewards and costs vary over time. What is rewarding at one time becomes costly at another.

- Many innovations are modified as teachers adapt new technologies to their classroom realities. This is so because innovations are often underdeveloped and are subject to different interpretations and because new ideas are mediated by different teacher styles.

- Ideas and people from outside the school system can be powerful initiators of school improvement, provided that they identify with the realities of schools and are willing to adapt to local conditions.

- Information that relates to teachers' real classroom situations and their support for innovation is a necessary prerequisite for instruction-focused school improvement.

MISSION

The mission of the Far West Laboratory is to contribute to the improvement of the quality of learning experiences that support the values and functions of a humanistic society.

To accomplish this mission, the Laboratory directs its efforts in four major areas.

1. Producing new knowledge through research:

   - Conducting research projects that can increase knowledge about the nature of education.
   - Conducting programmatic research programs that meet identified requirements for new knowledge about educational issues.

2. Conducting programmatic development leading to new high quality products or processes that will serve the needs of all learners, including the very young, the elderly, women, and minorities. The Laboratory will give priority to programs concerned with:

   - Processes of quality teaching and learning.
   - Utilization of the outcomes of educational research and development.
   - Education as it relates to work.
   - Education for a pluralistic society.

3. Providing technical assistance in support of quality education for those who seek or need such service:

   - Conducting assistance programs funded by government or other agencies that address local or national concerns
   - Developing ways and means of responding to requests that originate with users of technical assistance services.
   - Providing implementation assistance for new products or processes developed by the Laboratory.

4. Maintaining an impartial environment where educational issues can be confronted and assessed by:

   - Communicating with a wide array of groups in education.
   - Providing a forum for interaction among concerned individuals and organizations.
   - Actively disseminating new knowledge concerning alternatives and issues in education.